

CHAN et al.  
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**AMENDMENTS TO THE SPECIFICATION:**

Please add a new heading and a new paragraph on page 3, after line 26, as follows:

**-BRIEF SUMMARY**

A method and system for analyzing performance of a turbine is provided. In one embodiment, the turbine optimizer system allows a user to evaluate the current performance of their turbine with its current configuration and the future performance of their turbine with a modified configuration. The evaluated performance may be expressed in terms of certain performance characteristics such as output, heat rate, availability, and reliability. The turbine optimizer may provide a comparison of these performance characteristics versus the performance characteristics of similar turbines. For example, the turbine optimizer may indicate the average performance of similar turbines and the best performance of similar turbines. The turbine optimizer initially receives from the user the identification of the turbine to be analyzed. The turbine optimizer then retrieves the configuration information for the identified turbine from its configuration database. The configuration database may contain information describing the configuration of each turbine that is currently installed at a customer power plant. The turbine optimizer then determines the current performance characteristics of the identified turbine based on the retrieved configuration information. As discussed below more detail, the turbine optimizer may determine the current performance characteristics based on actual measurements of those performance characteristics (e.g., during a precision test), based on initial performance characteristics of a new turbine adjusted to account for hours of operation of the turbine, and based on a simulation of the performance characteristics using measurements of other characteristics (e.g., instrumentation readings). The turbine optimizer then provides to the user a display page that lists the actual or estimated current performance characteristics. That display

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page may also include current configuration information (e.g., total hours of operation) so that the user can make any appropriate corrections to the information. Upon receiving from the user a request to display the future performance characteristics, the turbine optimizer calculates the performance characteristics for that turbine if various modifications are made to its configuration. The turbine optimizer may provide a graph that illustrates the current performance characteristics and the future performance characteristics with those modifications. The turbine optimizer may also calculate various financial estimates (e.g., the estimated annual revenue) based on the current operating characteristics (e.g., fuel cost and electricity price) of the turbine. The turbine optimizer may also allow the user to place an order to change the configuration of the turbine. In this way, the user can evaluate the performance of turbine based on accurate configuration information, can receive prompt feedback as to the performance characteristics of various modifications, can evaluate financial impact of various modifications, and can compare the performance characteristics of the turbine to performance characteristics of similar turbines.—

On page 4, line 25 through page 5, line 29, delete the paragraph beginning with “A method and system for analyzing performance of a turbine”.